Integrated Triage for Ambulatory Settings in the Context of COVID-19: A novel decision support algorithm

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Introduction

Triage is an essential element of a health care environment dedicated to prioritizing clinical care for the sickest patients. Effective triage systems are proven to save lives. With the COVID-19 pandemic, there have been necessary changes to triage planning to incorporate screening and cohorting mechanisms for maximal safety for health care workers and patients.

How to use this tool

“Integrated Triage for Ambulatory Settings in the Context of COVID-19” is a novel decision support tool designed to safely and effectively direct all patients who present to the clinical setting to appropriate care in the context of the COVID-19 pandemic. This tool presents an algorithm that integrates screening, physical triage and cohorting, and infection prevention and control (IPC) with clinical triage principles to prioritize patients based on acuity.

This flow diagram is an innovative contribution to the evolving COVID-19 pandemic response in that it:

- Merges physical and clinical triage decision points into one flow diagram.
- Includes all patients presenting for care (with or without COVID-19 concerns) and includes decision support based on the patient’s reason for seeking care so that no patient is denied necessary medical attention.
- Incorporates IPC considerations into every decision point, emphasizing the principle that health care workers can safely render medical care to any patient when appropriate personal protective equipment (PPE) is available.

Users of this tool should be mindful of the following recommendations:

1. This tool is meant to be adapted to the local context and applied within local frameworks.
2. While most patients will enter the pathway with universal screening, any patient presenting with severe/critical signs of illness (red triage category) should move directly to a resuscitation area for immediate stabilization.
3. This diagram provides an initial approach to categorizing patient acuity. Additional medical and diagnostic evaluation is required for initiation of specific medical treatment and final disposition decisions.
4. This tool strives to reinforce all clinical decision points with clear recommendations for IPC/PPE requirements. Remember, even patients who are not presenting with typical symptoms of COVID-19 may test positive for COVID-19, particularly during surges. Concurrently, patients with mild COVID-19 symptoms should not be denied medical attention for non-COVID-19 concerns if appropriate PPE is available and all members of the health care team are familiar with the principles of IPC.
5. Digital versions of this tool have links to key resources that expand upon the material presented here. These can be adapted or updated as new recommendations emerge.
The goal of this tool is to provide a framework for health care workers to connect patients who are both infected with and affected by COVID-19 to comprehensive, high quality, equitable care.

**Target Audience**

Health care workers (physicians, non-physician providers, nurses, midwives, allied health workers, social workers, community health workers) and non-clinical support staff working in ambulatory health care settings. With this tool, any staff member in a clinical setting should be able to safely direct a patient to the right care in the right place at the right time.

**LINKED RESOURCES:**


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Notes:

a. The referral and triage pathways are intended to be adapted to the local context and to comply with local clinical and ethical guidelines.

b. All recommendations should take into account judgment of clinicians and local capacity. For example, if patient requires higher level of care than can be provided at facility. Any patient assessed as critically ill at any point in this process should proceed to immediate care for stabilization. Red flag signs for COVID-19 include SpO2 <94% at rest or other clinical signs of severe respiratory distress, severe chest pain, altered mental status, severe weakness, inability to tolerate food or liquids by mouth, or clinical judgment of emergency. Risk factors for developing severe or critical COVID-19 include age >60, obesity, comorbid diabetes or hypertension, immunosuppression, pregnancy, and the presence of chronic cardiovascular, pulmonary, liver, neurologic, or psychiatric disease.

c. Infection prevention and control (IPC) and personal protective equipment (PPE): Minimum PPE/standard precautions are recommended for all healthcare workers (HCWs), though heightened PPE precautions can be used per local guidelines and HCW preference. Guidance may change to reflect evolving contexts (e.g., variants).

d. Testing should be offered if not previously tested or if prior test was negative but COVID-19 is clinically suspected. If testing is not available, approach a patient with symptoms or signs of COVID-19 as presumed positive.

Links to Key Resources:
1. Navigating COVID-19 Clinical Care Pathways Across the Health Care System: a practical guide for primary health care workers
3. WHO: Home care for confirmed or suspected COVID-19 and their contacts
4. WHO: Algorithm for COVID-19 Triage and Referral
5. OpenCriticalCare.org: Tools for interfacility transfer
7. WHO: Clinical care of severe acute respiratory infections - Toolkit

UNIVERSAL SCREENING
Everyone entering the facility should be screened for COVID-19 symptoms or exposure

If YES to 1 OR 2

1. Have you had a positive COVID-19 test OR any of the following symptoms in the last 10 days?
   Fever, cough, headache, body ache, sore throat, runny nose, feeling sick in general?

2. Have you been exposed to a known case of COVID-19 in the last 14 days?

PPE/IPC
Patients: Universal masking
HCWs: Any staff member screening undifferentiated patients should observe droplet/airborne precautions

If NO to 1 AND 2

PHYSICAL TRIAGE AND PPE/IPC

COVID-19 Care Pathway
Direct patient to area of facility designated for COVID-19 care. This may be a separate area, designated ward or rooms, or a virtual/telehealth option.

PPE/IPC
Patients: Universal masking
HCWs: Droplet/Airborne precautions
Heighened IPC protocols for cleaning, ventilation, room turnover

COHORTING BY CASE DEFINITION AND REASON FOR SEEKING CARE

Suspected or confirmed COVID-19+, requesting medical attention for COVID-19 symptoms

Suspected or confirmed COVID-19+, requesting medical attention for other medical issue

No COVID-19 symptoms, confirmed recent exposure, requesting attention for other medical issue

No COVID-19 symptoms, no exposure, requesting routine medical attention

CLINICAL TRIAGE, ASSESSMENT, AND DISPOSITION

COVID-19 CLINICAL TRIAGE

Stabilize and transfer/admit

COVID-19 Red flag signs

Stable: mild/moderate illness, with risk factors

Stable: mild/moderate illness, minimal risk factors

COVID-19 testing, home-based care, medical evaluation as needed

ROUTINE CARE CLINICAL TRIAGE

Emergency

Stabilize and transfer/admit

Urgent: high priority

Priority assessment, stabilization and management

Stable: low priority

Assessment and management as able